UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 4

345 COURTLAND STREET N E
ATLANTA GEORGIA 30365

4WD-RCRA

AUG 12 1996

SUBJ: Evaluation of Laidlaw Environmental Services (TOC), Inc.'s status under the RCRIS Corrective Action Environmental Indicator Event Codes (CA725 and CA750) EPA I.D. Number: SCD 981 467 616

FROM: Denise Housley DH 8/7/1996
SC/TN Facility Management Team

THRU: Susan Deihl SD 8/8/96
RCRA Branch

TO: G. Alan Farmer
Chief, RCRA Branch Alan F.

I. PURPOSE OF MEMO

This memo is written to formalize an evaluation of Laidlaw Environmental Services (TOC), Inc.'s (LESTOC's) status in relation to the following RCRIS corrective action codes:

1) Human Exposures Controlled Determination (CA725),

2) Groundwater Releases Controlled Determination (CA750).

The applicability of these event codes adheres to the definitions and guidance provided by the Office of Solid Waste (OSW) in the July 29, 1994, memorandum to the Regional Waste Management Division Directors.

Concurrence by the RCRA Branch Chief is required prior to entering these event codes into RCRIS. Your concurrence with the interpretations provided in the following paragraphs and the subsequent recommendations is satisfied by dating and signing above.

II. HUMAN EXPOSURES CONTROLLED DETERMINATION (CA725)

There are three (3) national status codes under CA725. These status codes are:

1) YE Yes, applicable as of this date.

2) NA Previous determination no longer applicable as of this date.

3) NC No control measures necessary.

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II. HUMAN EXPOSURES CONTROLLED DETERMINATION (CA725)

There are three (3) national status codes under CA725. These status codes are:

1) YE Yes, applicable as of this date.

2) NA Previous determination no longer applicable as of this date.

3) NC No control measures necessary.

Region 4 has also added a regional status code to CA725 which tracks initial evaluations in which a determination is made that plausible human exposures to current contamination risks are not controlled. This regional status code is listed as "NO, not applicable as of this date." Use of the regional status code is only applicable during the first CA725 evaluation. Evaluations subsequent to the first evaluation will use the national status codes (i.e., YE, NA and NC) to explain the current status of exposure controls.

Note that the three national status codes for CA725 are based on the entire facility (i.e., the codes are not SWMU specific). Therefore, every area at the facility must meet the definition before a YE, NA or NC status code can be entered for CA725. Similarly, the regional status code, NO, is applicable if plausible human exposures are not controlled in any areas of the facility.

This particular CA725 evaluation is the first evaluation performed by EPA for LESTOC. Because assumptions have to be made as to whether or not human exposures to current media contamination are plausible and, if plausible, whether or not controls are in place to address these plausible exposures, this memo first examines each environmental media (i.e., soil, groundwater, surface water, air) at the entire facility including any offsite contamination emanating from the facility rather than from individual areas or releases. After this independent media by media examination is presented, a final recommendation is offered as to the proper CA725 status code for LESTOC.

The following discussions, interpretations and conclusions on contamination and exposures at the facility are based on the following reference documents: 1991 RCRA Facility Investigation Report and the 1995 Corrective Measures Study/Corrective Measures Alternative Selection.

III. MEDIA BY MEDIA DISCUSSION OF CONTAMINATION AND THE STATUS OF PLAUSIBLE HUMAN EXPOSURES

Investigation and study of LESTOC's current conditions identifies two (2) plumes of contamination, an inorganic salt plume and an organic plume. The groundwater flow is in a west-southwesterly direction from the source areas of the plumes. Groundwater is contacted in the range of 25 to 45 feet in depth from the ground surface.

The salt plume is primarily sodium (target limit for corrective action 1650 ug/l), chloride (MCL 250 ug/l) and barium (MCL 2 ug/l). The source of the plume is former scrubber water ponds which were closed in 1988. Sodium and chloride were known constituents of the scrubber water. Barium is determined to be leached from the soil in which barium is naturally occurring by the chloride contamination concentrations. Groundwater monitoring has indicated that in some instances groundwater

concentration exceedences of chloride has been as high as 950 ug/l and 24.70 ug/l for barium. The plume is well defined and does co-mingle with the organic plume.

The organic plume is also well defined and consists of the following volatile organic constituents: 1,1,2,2-tetrachloroethane (SMCL 1.8 ug/l), 1,1-dichloroethene (MCL 7.0 ug/l), 1,2-dichloroethene (total) (MCL 70.0 ug/l), methylene chloride (MCL 5.00 ug/l), tetrachloroethene (MCL 5.00 ug/l), trichloroethene (MCL 5.00 ug/l). The source for this plume appears to have been a spill or possibly a past burn tank leak, both which have had corrective action and/or closure. Groundwater monitoring has shown exceedences of the above referenced volatile organics in concentrations as high as the following:

1,1,2,2-tetrachloroethane	16.25 ug/l
1,1-dichloroethene	11.25 ug/l
1,2-dichloroethene (total)	451 ug/l
Methylene chloride	12.75 ug/l
Tetrachloroethene	3101 ug/l
Trichloroethene	323 ug/l

The human health and environmental risk assessments indicated that there is no threat to human health or the environment currently or previously. There are no identified receptors in contact with this contamination. The migration rate of the two plumes is low. The salt plume is naturally degrading over time. LESTOC maintains a groundwater monitoring system which should indicate any changes in plume direction or concentrations approaching the facility boundary.

Although future risk is unlikely, the facility is currently constructing an approved corrective measures remedy to address any plausible exposure from future use of this groundwater or discharge of these plumes to surface water bodies. A series of vertical extraction wells and treatment system are being installed which will extract the contamination plumes convey the extract to the LESTOC onsite water treatment system and then convey the treated discharge to the North Tyger River POTW for biological waste water treatment. The final remedy should be in full operation by the end of this year.

IV. STATUS CODE RECOMMENDATION FOR CA725:

RECOMMENDATION: CA725 YE Yes, applicable as of this date

* Plausible human exposures controlled by implementation of a final remedy

Based on EPA's formal approval of the final remedy

selection, remedial measures are being implemented and plausible human exposures in all applicable media at LESTOC *are controlled.* Because plausible human exposures to contamination at the facility are being controlled, it is recommended that CA725 YE be entered into RCRIS.

V. Groundwater RELEASES CONTROLLED DETERMINATION (CA750)

There are three (3) status codes listed under CA750:

1) YE Yes, applicable as of this date.

2) NA Previous determination no longer applicable as of this date.

3) NR No releases to groundwater.

Region 4 has also added an additional status code which tracks the initial evaluations in which a determination is made that groundwater releases are not controlled. This regional status code is listed as "NO, not applicable as of this date." Use of the regional status code is only applicable in the first CA750 evaluation. Evaluations subsequent to the first evaluation will use the national status codes (i.e., YE, NA and NR) to explain the current status of groundwater control.

Note that the three national status codes for CA750 are designed to measure the adequacy of actively or passively (i.e., natural attenuation) controlling the physical movement of groundwater contaminated with hazardous constituents above relevant action levels. The designated boundary (e.g., the facility boundary, a line up gradient of receptors, the leading edge of the plume as defined by levels above action levels or cleanup standards, etc.) is the point where the success or failure of controlling the migration of hazardous constituents is measured. Every contaminated area at the facility must be evaluated and found to have the migration of contaminated groundwater controlled before a "YE" status code can be entered. Similarly, the regional status code is applicable if contaminated groundwater is not controlled in any area(s) of the facility.

This evaluation for CA750 is the first formal evaluation performed for LESTOC. Please note that CA750 is based on the adequate control of **all** contaminated groundwater at the facility.

The previous discussions, interpretations and conclusions on contaminated groundwater at the facility are based on the previously referenced RCRA Facility Investigation Report and Corrective Measures Study.

VI. STATUS CODE RECOMMENDATION FOR CA750:

RECOMMENDATION OPTION 1: CA750 YE

* Groundwater contamination exists and releases are controlled

As previously described, the groundwater is contaminated at concentrations above relevant action levels by releases from SWMUs and/or AOCs.

In addition to the observed groundwater contamination, there are control measures present at the facility which control the physical migration of contaminated groundwater beyond a designated boundary.

Based on the above discussion, it is recommended that CA750 YE be entered into RCRIS.

D.Housley:6335:7/17/96:g:fmtsctn/llawttoc/lestocei.wpd

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